

# Body Composition

## What is Body Fat?

Body fat is an essential component to the body. Body fat is a good source of insulation and therefore regulates the body's temperature on a consistent basis. It is also used as a major energy reserve as well as for support and protection of various organs. However, excess body fat can hinder bodily functions and increases an individual's risk for heart disease, cancer and diabetes.

## What is Bioelectrical Impedance?

Bioelectrical Impedance is one form of measuring body composition. The method is conducted by sending a weak electric current through the body. Readings are taken from the resistance in the electric current – the more body fat, the more resistance. Calculations of body fat are then made from the information of electrical resistance, age, weight, gender and height.

## How to Decrease Body Fat

Body fat can be controlled in various ways. Eating a healthy diet and exercising are two ways that contribute to controlling body fat. A minimum of 30 minutes of aerobic exercise (running, biking, and swimming) at least 5 times a week in combination with a balanced diet are recommended.

### ACSM (American College of Sports Medicine) Recommended Body Composition (% Body Fat) for Men and Women

Male Category	Age				
	20-29	30-39	40-49	50-59	60+
Low	7.1-11.7	11.3-15.8	13.6-18	15.3-19.7	15.3-20.7
Borderline Low	11.8-15.8	15.9-18.9	18.1-21	19.8-22.6	20.8-23.4
Average	15.9-19.4	19-22.2	21.1-24	22.7-25.6	23.5-26.6
Borderline High	19.5-25.8	22.3-27.2	24.1-28.8	25.7-30.2	26.7-31.1
High	25.9	27.3	28.9	30.3	31.2

Female Category	Age				
	20-29	30-39	40-49	50-59	60+
Low	14.5-18.9	15.5-19.9	18.5-23.4	21.6-26.5	21.1-27.4
Borderline Low	19-22	20-23	23.5-26.3	26.6-30	27.5-30.8
Average	22.1-25.3	23.1-26.9	26.4-30	30.1-33.4	30.9-34.2
Borderline High	25.4-32	27-32.7	30.1-34.9	33.5-37.8	34.3-39.2
High	32.1	32.8	35	37.9	39.3



# Body Mass Index

A good way to determine if your weight is healthy for your height is to calculate your body mass index (BMI). Being overweight puts strain on your heart and can lead to serious health problems. These problems include:

- Heart disease
- High blood pressure
- Sleep apnea
- Type 2 diabetes
- Varicose veins

## How to determine your BMI

Your BMI estimates how much you should weigh based on your height. Here are the steps to calculate it:

- Multiply your weight in pounds by 703.
- Divide that answer by your height in inches.
- Divide that answer by your height in inches again.

Use the chart below to see what category your BMI falls into, and if you need to be concerned about your weight.

BMI	CATEGORY
Below 18.5	Underweight
18.5 - 24.9	Healthy
25.0 - 29.9	Overweight
30.0 - 39.9	Obese
Over 40	Morbidly obese

BMI is not always an accurate way to determine whether you need to lose weight. Here are some exceptions:

- **Body builders:** Because muscle is more dense than fat, people who are unusually muscular may have a high BMI.
- **Elderly:** In the elderly it is often better to have a BMI between 25 and 27, rather than under 25. If you are older than 65, for example, a slightly higher BMI may help protect you from osteoporosis.
- **Children:** While an alarming number of children are obese, do not use this BMI calculator for evaluating a child. Talk to your pediatrician about the appropriate weight for your child's age.

Your BMI alone cannot predict your health risk, but most experts say that a BMI greater than 30 (obesity) is unhealthy. No matter what your BMI is, exercise can help reduce your risk of heart disease and diabetes. Remember to always ask your doctor before starting an exercise program.

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